WHAT IS CLAIMED IS:

1. A printer with an automatic density adjusting function that prints a color image on a color photographic paper that has a cyan (C) layer, a magenta (M) layer and an yellow (Y) layer by producing a color of each layer, said printer comprising:

a test pattern data producing device that produces test pattern data for printing test patterns of red (R), green (G) and blue (B) colors on said color photographic paper;

a printing device that prints the test patterns of R, G and B colors on said color photographic paper according to the test pattern data;

a light source that has bright line spectrums of R, G and B colors and throws lights onto the test patterns of R, G and B colors;

a light-receiving sensor that has spectral sensitivity characteristics in wavelength areas of R, G and B colors and measures amounts of reflected lights of the test patterns of R, G and B colors;

a density measuring device that measures densities of C, M and Y colors according to the amounts of the reflected lights of the test patterns of R, G and B colors that are acquired from said light-receiving sensor; and

an adjusting device that adjusts color production of the C, M and Y layers of said color photographic paper so that the measured densities of C, M and Y colors are target densities.

2. The printer with the automatic density adjusting function as defined in claim 1, wherein said light-receiving sensor also works as a home position sensor that detects a home position of the color photographic paper.

3. The printer with the automatic density adjusting function as defined in claim 1, wherein said light source is one of an M fixation fluorescent lamp and a

Y fixation fluorescent lamp that is composed from fluorescent materials emitting the bright line spectrums of R, G and B colors.

4. The printer with the automatic density adjusting function as defined in claim 3, wherein said light-receiving sensor also works as a home position sensor that detects a home position of the color photographic paper.

5. The printer with the automatic density adjusting function as defined in claim 1, wherein:

said test pattern data producing device produces test pattern data on six test patterns that are test patterns of R, G and B colors with lowest densities and test patterns of R, G and B colors with reference densities; and

said density measuring device finds a ratio of an amount of a reflected light of the test pattern of R color with the lowest density to that of the test pattern of R color with the reference density, a ratio of an amount of a reflected light of the test pattern of G color with the lowest density to that of the test pattern of G color with the reference density, and a ratio of an amount of a reflected light of the test pattern of B color with the lowest density to that of the test pattern of B color with the reference density according to amounts of reflected lights of the six test patterns that are acquired from said light-receiving sensor and finds the densities of C, M and Y colors according to the found ratios.

6. The printer with the automatic density adjusting function as defined in claim 5, wherein said light-receiving sensor also works as a home position sensor that detects a home position of the color photographic paper.

7. The printer with the automatic density adjusting function as defined in claim 5, wherein said light source is one of an M fixation fluorescent lamp and a

Y fixation fluorescent lamp that is composed from fluorescent materials emitting the bright line spectrums of R, G and B colors.

8. The printer with the automatic density adjusting function as defined in claim 7, wherein said light-receiving sensor also works as a home position sensor that detects a home position of the color photographic paper.

9. A density adjusting method of a printer that prints a color image on a color photographic paper that has a cyan (C) layer, a magenta (M) layer and an yellow (Y) layer by producing a color of each layer, said density adjusting method comprising the steps of:

printing test patterns of red (R), green (G) and blue (B) colors on said color photographic paper;

sequentially throwing lights onto the test patterns of R, G and B colors with a light source that has bright line spectrums of R, G and B colors;

sequentially measuring amounts of reflected lights of the test patterns of R, G and B colors with a light-receiving sensor that has spectral sensitivity characteristics in wavelength areas of R, G and B colors;

calculating densities of C, M and Y colors according to the amounts of the reflected lights of the test patterns of R, G and B colors; and

adjusting color production of the C, M and Y layers of said color photographic paper so that the calculated densities of C, M and Y colors are target densities.